

DUAL MODE FILTER FOR MOBILE TELECOMMUNICATIONS

Abstract of the Disclosure

A dual mode filter for mobile communication may implement two disparate cellular systems such as GSM and W-CDMA. The same transceiver may be utilized to selectively receive and transmit in either of the two systems. When
5 the system is in a GSM area, the system sends and receives GSM signals using programmable filters. Two cascaded digital decimation filters may substitute for one narrow band digital decimation filter in conventional designs. One of the filters is a multi-band digital decimation filter with N bands and the other of the digital filters is used to reject the N-1 multi-band of the system. The number of
10 taps on each filter may selectively be set to implement either GSM or W-CDMA. In addition, the output for the system may be set to be the output of the first filter, in the case of a W-CDMA system, or the combination of the two cascaded filters in a GSM system.